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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,783	09/17/2003	Norio Michiie	242929US2	2967

22850 7590 01/23/2006

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EXAMINER

MASDON, DAVID T

ART UNIT PAPER NUMBER

2188

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,783

Applicant(s)

MICHIE ET AL.

Examiner

David Masdon

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/11/04 & 11/28/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) were submitted on 2/11/2004, 11/29/2004, 2/16/2005, 9/14/2005, 11/28/2005. The submission filed on 2/11/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, this information disclosure statement is being considered by the examiner. However, the submissions filed on 11/29/2004, 2/16/2005, 9/14/2005, 11/28/2005 do not comply with the provisions of 37 CFR 1.97. If these references are to be considered, they need to be filed on a PTO form 1449.

Drawings

2. The drawings filed on 9-17-2003 have been approved by the examiner.

Specification

3. The disclosure is objected to because of the following informalities: recording is misspelled. (page 45, line 16)

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble describes "a program" which is non-statutory. Appropriate action is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, 10 rejected under 35 U.S.C. 102(b) as being anticipated by Nakatsuyama (US 6,253,246).

As per claim 1, Nakatsuyama discloses a data processing device comprising:

a plurality of data processing units; [(the controller consists of many data processing units)
column 4, lines 60-68]

a first memory shared for storing data, to which first memory each of said data processing units makes an access so as to perform an operation; [(from the memory)
column 10, line 19]

a transfer completion time designation unit for designating a transfer completion time according to need, within which transfer completion time, transferring the data in response to the accesses made by said data processing units should be completed;
[(unit that designates transfer time) column 5, lines 3-17]

an expected transfer completion time calculation unit for calculating an expected transfer completion time needed for completing the data transfer response to the accesses made by said data processing units, said expected transfer completion time calculation unit calculating the expected transfer completion time by taking current access status of said first memory into consideration; and [(calculates transfer rate based on time) column 11, line 36-50]

It is inherent that if the transfer rate and volume of data are given, then the needed specified time for transfer can be calculated. This reference teaches calculating transfer rate based on a specified completion time and volume of data, in much the same way that the current application teaches calculating the transfer rate (page 2, section 0023, line 6). Since it is inherent to translate between these two different formulas, it would have been obvious to someone in the art to anticipate the invention disclosed in claim 1.

an access management unit for managing the access to said first memory based on the transfer completion time and the expected transfer completion time. [(means to control volume of data) column 2, line 36]

With regard to claim 2, Nakatsuyama discloses the device as claimed in claim 1, said device further comprising:

a second memory for storing the data stored in said first memory, said second memory having a transfer rate lower than a transfer rate said first memory; wherein,

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when the data transfer is executed between said first memory and said second memory, said expected transfer completion time calculation unit calculates the expected transfer completion time by taking the data transfer rates of said first memory and said second memory into consideration. [(different types of memory can be used) column 12, lines 59-63]

With regard to claim 3, Nakatsuyama discloses the device as claimed in claim 1, wherein:

when one of the data processing units makes an additional access to said first memory, said access management unit prevents or postpones the additional access to said first memory when the expected transfer completion time exceeds the transfer completion time. [(downloads are prohibited if a predetermined threshold is exceeded) column 11, lines 56-63]

With regard to claim 4, Nakatsuyama discloses the device as claimed in claim 1, wherein:

said data processing device is an image-forming device provided with one data processing unit as an image input unit for inputting image data to said first memory and one data processing unit as an image output unit for outputting the image data stored in said first memory. [(multimedia information including image data) column 12, lines 21-26]

Claim 5 and 10 are rejected with the same rationale as claim 1.

Claim 6 is rejected with the same rationale as claim 2.

Claim 7 is rejected with the same rationale as claim 3.

Claim 8 is rejected with the same rationale as claim 4.

7. Claims 11-16, 19-24 rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al (US 4,763,323).

With regard to claim 11, Nelson et al discloses an image-forming device comprising:

an image input unit; [(image data generator) column 4, lines 14-15]

an image output unit; [(image display) column 4, line 16]

a storage unit for storing an image signal provided from said image input unit in a primary storage part, and storing the image signal stored in the primary storage part in a secondary storage part; [(remote data storage element) column 4, line 17]

a delivering unit for delivering the image signal stored in the primary storage part, which image signal is read out from the secondary storage part, to said image output unit; and [(devices are to be coupled to communication channel) column 4, line 21]

a priority designation unit designating priority for each of a plurality of image signal input/output operation requests. [(master node establishes polling priority) column 2, lines 50-51]

With regard to claim 12, Nelson et al discloses the image-forming device as claimed in claim 11, said device further comprising:

a request acceptance unit for accepting the image signal input/output operation requests; [(non-master node request data connection) column 6, line 54]

a processing order control unit for determining a processing order of the image signal input/output operation requests based on respective priorities designated by said priority designation unit; and [(master node determines polling priority based on the other nodes' priorities) column 2, lines 55-63]

an interruption/resumption control unit for interrupting a current image signal input/output operation request when the priority of the current image signal input/output operation request lower than a highest priority of an image signal input/output operation request among the image signal input/output operation requests, and for resuming the current image signal input/output operation request after completion of the image signal input/output operation request with the highest priority. [(master node allows or prevents communication based on their respective priorities) column 2, lines 55-68]

With regard to claim 13, Nelson discloses the image-forming device as claimed in claim 12, said device further comprising:

a selection unit for selectively executing the control of said processing order control unit and said interruption/resumption control unit. [(master node selectively polls other nodes) column 2, lines 55-57]

Claim 14 is rejected with the same rationale as claim 11.

Claim 15 is rejected with the same rationale as claim 12.

Claim 16 is rejected with the same rationale as claim 13.

With regard to claim 19, Nelson et al discloses a data processing device comprising:

a unit for receiving a plurality of data transfer process requests; [(plurality of communication nodes) column 2, line 50-51]

a unit for calculating a required process time necessary for executing all data transfer processes corresponding to the data transfer process requests time-sharing process manner, when at least one data transfer process has a time constraint; and [(calculates transfer rate based on time) column 11, line 36-50]

a unit for executing in the time-sharing process manner all data transfer processes except for data transfer processes that should be excluded from those data transfer processes to be executed for the purpose of satisfying the time constraint, when the calculated required process time exceeds the time constraint for the relevant at least one data transfer process. [(master node to establish polling priority) column 2, lines 50-51]

With regard to claim 20, Nakatsuyama discloses the data processing device as claimed in claim 19, wherein:

said unit for executing the time-sharing process manner all data transfer processes except for data transfer processes that should be excluded from those data transfer processes to be executed for the purpose of satisfying time constraint selects data transfer processes to be excluded from those data transfer processes to be executed for the purpose of satisfying the time constraint based predetermined priority information provided to respective data transfer processes. [(while still providing time division multiplexed service) column 2, line 39]

With regard to claim 21, the data processing device as claimed in claim 20, wherein:

the data transfer processes that should be excluded comprise those data transfer processes having a lower priority in said predetermined priority information. [(polls nodes with higher priority more frequently than those of lower priority) column 2, lines 62-65]

Claim 22 is rejected with the same rationale as claim 19.

Claim 23 is rejected with the same rationale as claim 20.

Claim 24 is rejected with the same rationale as claim 21.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 17 and 18 rejected under 35 U.S.C 103 (a) as being unpatentable over Nakatsuyama (US 6,253,246) in view of Nelson et al (US 4,763,323).

As per claim 17, the rationale of rejection for claim 1 is included here within. Nakatsuyama does not disclose expressly a priority designation unit for designating priority for each of the accesses made by said data processing units. However, Nelson et al discloses a master node to establish polling priority. (column 2, lines 50-51)

Nakatsuyama and Nelson are analogous art because they are from the same field of endeavor, namely data transfer. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the polling priority of Nelson et al into the system of Nakatsuyama. The motivation for doing so would have been to be efficient in transmitting data. (Nelson et al; column 2, line 24)

Claim 18 is rejected with the same rationale as claim 17.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,623,639 – Yazaki et al – MEMORY MANAGEMENT SYSTEM FOR THE TIME-WISE MANAGEMENT OF MEMORY

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Masdon whose telephone number is (571)272-6815. The examiner can normally be reached on Monday - Friday, 7am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571)272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DM

Mano Padmanabhan
7/19/06